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Economies in Public Education

[Editor's Note: This Tax Review *is an account of a panel discussion on education held at the annual meeting of the National Taxpayers Conference in Washington. Participants were: Sidney J. Tickton, Consultant, Fund for the Advancement of Education, Dr. John Dale Russell, Director, Office of Institutional Research, New York University and Irving Gersten, Associate Secretary, Council for Basic Education.]*

THE schools and colleges of the nation will enroll 46.5 million pupils in the school year that began this Fall, compared with approximately 44.5 million in the school year that ended this June. Higher educational institutions will enroll 3.8 million, and another 42.7 million will be enrolled in primary and secondary schools, including 36 million in public schools.

Indicative of how far and fast enrollment has come in a few brief years, it is estimated that the public school population was 38 percent greater in the school year 1958-59 than it was in the year 1949-50. One in every three young people is going to college today; in 1930, only one of 30 youngsters went.

From the standpoint of educators and taxpayers alike, this upsurge – which may well continue for at least another decade – poses a serious financial problem. How will the nation meet the educational requirements of these millions today, tomorrow and the day after that?

There are few who would deny the opportunity for a maximum education to those who seek it. Indeed, recent reports about the stress put on education in Soviet Russia, make it imperative the United States take a second look at its educational system, gear it to the jet-atom demands of the age. The cost in money taken from the private sector of the economy, in tax revenues demanded at state and local levels however, will not be small.

The size of the tax burden alone is already tremendous. It has been growing for years, particularly in the last decade. It is significant that while the public school pupil population grew 38 percent from 1950 to 1959, money made available for school current spending, revenue obtained chiefly from taxes to support teachers' salaries, building operation and maintenance, and pupil transportation, increased by 124 percent in the 1950-59 period.

Revenue for current operation spending (all spending except capital outlay and interest), has more than doubled between 1950 and 1959, or from $5.4 billion to $12.1 billion. In 1940 such revenue amounted to $2.3 billion. Current spending per pupil in average daily attendance has almost quadrupled since 1940.

With this background of rising expenditures and facing still steeper outlays, many educators and laymen have begun to cast about for some way to make the expenditure burden more tolerable – without in any way diluting, indeed, enriching – the educational system. Many plans have been put forward, from running schools on a year 'round basis, to deleting so-called "frill" courses that cost money and needlessly waste pupils' time.

At the annual Washington meeting of the National Taxpayers Conference, representing 37 state taxpayer

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organizations, three educators offered some explicit ideas for effecting economies in educational outlays.

Sidney G. Tickton, Consultant, Fund for the Advancement of Education, noted that education, unlike American industry, is lagging behind in making changes to meet new conditions.

Change, he said, is the lifeblood of most corporations. "The cry is continually for better products, if possible, at lower prices . . . the search is always for greater productivity of the worker, wider markets, better methods, etc." As a result, productivity of the American worker has grown 2.5 percent a year for 30 years, the average work week has declined from 48 to 40 hours over the same period, and real income per worker has grown by 80 percent.

On the other hand, he noted, there has not been a proportionate amount of research or development or change in education in the United States. Productivity, he said, is about the same as it was a quarter century ago. The machinery of education makes the introduction of change difficult and cumbersome.

Change in Education Lags

As a practical matter, educators have been against changes in the educational field, he said, but if a receptive attitude toward change could be developed in schools, colleges and universities, some of the ideas proved successful already in individual communities might be adopted on a nationwide scale to provide more and better education "with less pain to the taxpayer dollar," as Mr. Tickton put it.

Consideration of teachers' aides, larger classes, more use of instructional TV, of film strips and films and of language "laboratories," was recommended.

Experiments already carried out over a period of years in some cities with teachers' aides have shown that a substantial amount of time is saved in nonprofessional areas—clerical and "housekeeping" duties – giving the regular teacher more time to spend actually teaching.

Mr. Tickton believes there is "nothing sacred" about the formula that the ratio of students to teacher must diminish at each level of instruction, i.e., 30 to 1 in elementary schools, 25 to 1 in secondary schools or 13 to 1 in colleges and universities. Noting that experiments have already been carried on in this direction, he cited a report by a special Commission of the Association of Secondary School Principals to show that effective learning can take place in groups of larger than 100 pupils. The current thinking that all education's physical needs and economic planning have to be based on construction, size and number of classrooms, recruitment and use of teachers and organization of subject matter and grouping of pupils, has militated against striking out in new directions.

The ASSP commission has suggested that in the future there will be three different size classes with pupils spending their time in this way: classes of 100 or more, 40 percent of the time; group discussions of 12 to 15 students, 20 percent of the time, and individual study, writing, etc., 40 percent of the time.

In one of the experiments conducted in Newton, Mass., English teachers selected subject matter suitable for large class instruction and handled classes of from 60 to 425 in grades 10 to 12. In Lexington, Mass., and Norwalk, Conn., "team teaching", use of two teachers and one non-teacher, enabled handling of classes three times the regular size.

Much is still to be learned about the best use of TV as an educational medium, although presently it is estimated that one half million children and 100,000 college students are receiving part of their regular instruction via TV.

The big question about educational TV is whether children learn as well from it as from conventional methods of study. "It has now been established that students can learn as much, and under some circumstances, significantly more, from TV than from conventional classroom activities," according to Mr. Tickton.

The potential of films and film strips has barely been tapped, he noted, and the introduction of electronic devices as aids in learning foreign languages is growing fast. The values and savings through these devices are obvious: the "laboratories" relieve teachers of a tremendous amount of repetitive drill; they can use class time for explanation and have less class hours.

Space Savings Possible

Economies are possible also in our colleges and universities through better utilization of space, in the opinion of Dr. John Dale Russell, Director, Office of Institutional Research, New York University. A *Manual for Studies of Space Utilization in Colleges and Universities,* (published in 1957), based on conditions of four or five years ago, illustrates that institutions of higher education used their classrooms and

laboratories an average of 19.4 periods a week, or 44 percent of the possible periods in a 44-period week, and that only ten percent of the institutions used their room more than 60 percent of the available periods in a 44-period week.

The immediate, postwar period crisis brought on by growth in enrollments was first met by temporary buildings because it was recognized the "veterans' bulge" was temporary in nature. However, the prospective enrollment increases of the next 20 years cannot be met by such makeshift, temporary structures.

The cost of providing these new facilities at their present rate of utilization is "staggering." Dr. Russell estimates that each faculty member, on average, has to have about $80,000 tied up in capital funds for plant purposes and about $5,000 per student enrolled.

For every dollar a college or university puts into faculty salaries today, it has to put from 40 to 50 cents into the operation and maintenance of plant facilities. Each addition to plant space requires more money in current budgets to operate and maintain the space.

Among the reasons for present low utilization of plant space in many American colleges and universities, Dr. Russell cites these:

1. The elective system and wide scope of courses offered make many special facilities necessary and tend to divide the more advanced students into small instructional groups; 2. pressures are always in the direction of providing more space, i.e., the community and constituency of the institution always look on new buildings as tangible evidence of growth and prosperity, or the president of an institution normally takes great pride in new buildings he has added to the campus; 3. department heads, deans, professors, bring constant pressure to provide more space for their activities; Federal research programs require space.

Further, there is an unwillingness to abandon obsolete space when new buildings are provided, the plants in many schools are used only nine months of the year, and since use of rooms and "student stations" peak at certain hours and institutions have to build to meet these peak loads, the facilities are often used to less than capacity during other hours.

"Certain legitimate questions" says Dr. Russell can be raised about any projected expansion of a college or university plant with reference to the justification of need. These are: 1. has the institution had a space utilization survey; if so, what do the data show?; 2. has the institution explored the possibilities of handling the expanded enrollment by other means than an increase in the instructional space?; 3. over how many periods a week does the institution schedule its classes? Could the need be met by extending the number of periods in the weekly schedule?; 4. does it (the institution) provide more specialized rooms than are absolutely necessary?; 5. does it maintain a centralized control over the assignment of classes to rooms and over the time schedule for classes?; 6. does the institution tend to reserve certain buildings for classes in certain subjects, or can classes in any subject be scheduled in any suitably equipped room in any building on the campus?; 7. are projections of future enrollments made on a sound basis, and what will be the utilization of the instructional space after the proposed new construction is completed?

Values of Merit Pay

The third speaker, Irving Gersten, Associate Secretary, Council for Basic Education, touched upon one of the factors involved in the increasing cost of education—teachers' salaries, far and away the major contributors to school operating expenditure at the public primary and secondary school level.

Including the pay of principals and supervisors, teachers' salaries averaged $2,996 in 1940, $3,653 in 1950 and $4,935 in 1959 when changes in price levels are taken into account. This average 1959 salary was 35 percent greater than in 1950 and 65 percent greater than in 1940, indicating that advances in salaries have generally outstripped living cost increases.

Commenting upon the sharp division of opinion over the subject of merit pay for teachers, Mr. Gersten said that the philosophy *for* it can be simply stated: In teaching, as in other trades or professions, there are people who do their jobs well, others who do these jobs in an ordinary fashion and still others who do poorly. "It makes sense, it is only just, to pay the better or best ones a salary commensurate with their jobs." Such salaries, he said, will keep better teachers from leaving the profession and will bring new, good teachers into the systems that reward incentive and superior performance.

Against merit pay are ranged the arguments of the teachers' organizations. Among them: the teacher's task is complex, no objective criteria has been yet developed to measure the results of this task; in the great range of specialization in a modern school system, who is to measure the superior work of the art, music, home economics, etc. teachers?; merit rating,

by elevating some salaries, may tend to depress salaries of many others. It is charged that a merit system is really an economy device, not a device for rewarding merit.

He pointed out that increments in salary for teachers can be classified as "positional" or "preparational," or combinations of both. The former are based on the teacher's sex, his or her marital status, or whether the teacher teaches in the grade or secondary school. "Preparational" differentials may be based on academic preparation, i.e., degrees held or outside experience.

"Both positional and preparational increments are," he said, "automatic and fixed and are altogether unrelated to evidence of effective classroom performance.

"The supposed advantages of these methods of supplying increments are: 1. everyone knows what everybody else is getting; 2. the evils of subjective evaluation are automatically eliminated; 3. apple-polishing withers, since it cannot be rewarded; 4. teachers, when they get tenure, know their jobs are secure."

An 'Unrealistic' Operation

On the other hand, people opposed to automatic salary increments claim, he said, that it is unfair to reward competence and incompetence in the same way; it is unrealistic to operate schools as apart from the real world, since trade and industry do make attempts to distinguish the competent from the incompetent worker. Further, competent teachers, deprived of a very obvious form of incentive, say opponents of automatic increments, tend to leave the profession and good candidates do not even make the attempt to enter it. "Fixed, automatic increments are a safe haven from the 'real' world and bring to teaching people whose main ambition is to get by, not to do an outstanding job."

According to Mr. Gersten, there are a number of ways in which superior teaching performance can be rewarded. In West Hartford, Conn., for example, the increments for superior teachers are doubled before the maximum pay scale is ordinarily reached. The school then goes beyond the maximum to what is now known as a "super-maximum" or "maximum-plus" method.

In Glencoe, Illinois, rewards are given for professional growth throughout the entire school system. The school year is extended to include a five-week period, to August 1, during which teachers are engaged in studying, planning, attending workshops, etc.

As a whole, Mr. Gersten concludes, the communities which utilize these methods of bettering teachers financially are ones where there is a large concentration of professional people with interest in and respect for education. In them, merit programs have not been forced on teachers, but have resulted from long periods of study and formulation in which teachers have had a part. The systems in these communities are small enough to allow for evaluation, classroom visits, conferences, etc. The systems are selective enough and can afford to be, so that they do not have to carry incompetent teachers. There does not have to be a low minimum salary for ineffective personnel, which means that no one need be ashamed of being at the lowest schedule. It is important, however, that the raters and evaluators be people "who can be trusted," said Mr. Gersten.

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